

The Maury Project

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LONG-TERM GOALS

The Maury Project is an oceanography-based graduate-level teacher enhancement program, designed to promote the scientific literacy of young people by improving the background of pre-college teachers on the physical foundations of oceanography. The training of teachers is through a peer-training process of training the trainers at a two-week workshop held at the US Naval Academy and subsequently via single-topic modules presented in sessions presented throughout the United States.

OBJECTIVES

This project was designed to meet the following objectives:

- (a) Master teachers will be trained to be peer trainers and resource persons on the physical foundations of selected oceanographic topics and/or issues.
- (b) Self-contained single-topic teacher-enhancement instructional modules will be prepared and provided for use by the peer trainers in 1- to 2-hour training sessions.
- (c) The peer trainers will arrange and conduct training sessions for other teachers, with support of the AMS.
- (d) A national network of oceanography peer trainers and resource persons will be developed and maintained.
- (e) A variety of instructional resource materials on the physical foundations of oceanography and related topics will be prepared and disseminated for adaptations by teachers for use in their own classrooms.

APPROACH

There were three major components to this program: summer workshops for master precollege teachers, the production of teacher enhancement instructional resource materials, and the peer-training of teachers. The intent was to provide a core group of teachers with the knowledge and instructional

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resources enabling them, in turn, to train a large number of their peers on selected topics potentially appropriate as bases for learning experiences for young people in pre-college classrooms.

WORK COMPLETED

In Summer 2005, a two-week workshop for pre-college teachers on the physical foundations of selected oceanographic topics was held at the United States Naval Academy in Annapolis, MD.

RESULTS

With the training of 23 new participants in the Summer 2005 Maury Project workshop, a total of 270 teachers representing all 50 states, the District of Columbia, Puerto Rico, American Samoa, Argentina, Guam, Mexico, South Africa, Canada, Great Britain, Australia, Switzerland, Japan, and US Department of Defense Overseas School System have become peer trainers since the first peer-trainers summer workshop.

IMPACT/APPLICATIONS

Maury Project summer workshop participants are committed to organizing and offering a minimum of two single-topic training sessions lasting from one to two hours each. During the past year a total of 51 peer-training sessions on Maury Project topics were presented for 685 teachers. Summer 2004 workshop participants offered 38 of those training sessions for 503 teachers. An additional 12 training sessions were presented by teachers who attended the summer peer-trainers workshop in years prior to 2004. One Summer 2005 workshop participant has already reported a training session for 16 teachers. To see the multiplying effect of this program, consider that since its inception, over 1,450 workshops have been conducted by peer trainers across the country, reaching close to 24,000 teachers, each of whom reaches about 100 students daily.

TRANSITIONS

Beginning in Spring 2004, Maury Project alumni have played major roles in the development and implementation of *DataStreme Ocean*, a semester-long teacher enhancement course that is being offered nationwide by the AMS with NOAA support. Maury Project alumni lead 23 Local Implementation Teams (LITs) for the course. Through Spring 2005 Semester, a total of 623 precollege teachers were trained by this program. In Fall Semester 2005, another 210 teachers are enrolled.

Originally funded by the NSF for 3 summers starting in 1994, the existing Maury Project Summer Workshops at the Naval Academy received additional NOAA, Navy, and AMS support which made it possible to conduct workshops through Summer 2005. Funding has been sought to continue the Summer Workshop and peer training program for the next three years. ONR has committed substantial support towards this continuation and is now its major sponsor.

RELATED PROJECTS

Building on the experiences gained in the Maury Project and the *DataStreme Ocean* distance-learning teacher enhancement course, the AMS has developed an introductory college-level course entitled, *Online Ocean Studies*. The course was pilot tested in the Spring 2005 Semester at 12 undergraduate

institutions and is being nationally implemented in the Fall 2005 Semester with 17 licensed institutions. This course would not exist without the experiences gained and the learning materials that evolved from those developed in the Maury Project. A major benefit of the *Online Ocean Studies* course is that it will reach hundreds of preservice pre-college teachers.

PUBLICATIONS

14TH SYMPOSIUM ON EDUCATION, American Meteorological Society Annual Meeting, January 2005, San Diego, CA

1.10 DEVELOPING A GIS USING REAL TIME EARTH DATA: A STUDY OF THE EARTH SYSTEM. John D. Moore, Burlington County Institute of Technology, Medford, NJ.

P1.5 USING DLESE TO BUILD THE EARTH INFORAMTION SYSTEM. John D. Moore, Burlington County Institute of Technology, Medford, NJ; and W. R. Huskin.

P1.22 THE SEA & SKY CONNECTION. Ann T. Kelly, Our Lady of Sorrows School, St. Louis, MO.

P1.25 TEACHING HIGH SCHOOL METEOROLOGY THROUGH LIVE EVENT LEARNING. Craig R. Wolter, AMS/AERA and Windom Area High School, Windom, MN.

P1.40 ELEMENTARY SCHOOL EARTH SYSTEMS SCIENCE COLLABORATION PROJECT. Thomas P. Kelly, Grandville Public Schools, Grandville, MI; and D. Davis.

P1.42 EARTH2CLASS: EXPANDING OPPORTUNITIES TO LINK CLASSROOM TEACHERS AND RESEARCH SCIENTISTS. Michael J. Passow, White Plains Middle School, White Plains, NY and Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY; and G. J. Iturrino.

P1.43 AMS @ LDEO: FOLLOW-UP OPPORTUNITIES FOR AMS EDUCATION PROGRAM PARTICIPANTS. Michael J. Passow, White Plains Middle School, White Plains, NY and Lamont-Doherty Earth Observatory of Columbia Univ., Palisades, NY.

P1.53 AMS PRE-COLLEGE STUDENT CHAPTERS: TOUCHING THE FUTURE. Kathleen A. Murphy, Ladue School District, St. Louis, MO.

P1.54 ALVERNIA AND CABRINI COLLEGES: ADAPTATIONS OF EDUCATIONAL INITIATIVES. George W. Rumpp, Alvernia College, Reading and Cabrini College, Radnor, PA; and P. E. Rumpp.

J1.8 THE MAURY PROJECT AND DATASTREME OCEAN: TEACHING TEACHERS ABOUT THE COASTAL ZONE. David R. Smith, U.S. Naval Academy, Annapolis, MD; and I. W. Geer, J. M. Moran, and R. S. Weinbeck.

J1.9 THE INTEGRATION OF MAURY PROJECT MODULES WITH A MIDDLE SCHOOL SCIENCE KIT: CATASTROPHIC EVENTS. Barbara K. Walton-Faria, Thompson Middle School, Newport, RI.